

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS**

UNDERGROUND SOLUTIONS, INC., a
Delaware corporation,

Plaintiff,

v.

EUGENE PALERMO, a/k/a GENE
PALERMO,

Defendant.

Case No. 13-cv-8407

Judge Matthew Kennelly

**UNDERGROUND SOLUTIONS, INC.’S STATEMENT OF UNDISPUTED MATERIAL
FACTS IN SUPPORT OF ITS MOTION FOR SUMMARY JUDGMENT**

Underground Solutions, Inc. (“UGSI”), pursuant to Rule 56.1 of the Local Rules for the Northern District of Illinois, for its Statement of Facts as to which it contends there are no genuine issues, states as follows:

DESCRIPTION OF THE PARTIES

1. Plaintiff UGSI is a Delaware corporation with its principal place of business in Poway, California. (*See* Affidavit of UGSI Vice President of Engineering & Technology Thomas R. Marti (“Marti Affidavit”), ¶ 4, attached as Exhibit A).

2. UGSI is the sole manufacturer of Fusible PVC® Pipe, a thermally butt-fused polyvinyl chloride pipe that is implemented by third parties in applications in the water, wastewater, electrical and telecommunications industries. (*See* Dkt. # 66, Palermo’s Answer (“Ans.”) to UGSI’s Amended Complaint, ¶ 1; *see also* Marti Affidavit, ¶ 6).

3. UGSI sells thermally butt-fused PVC pipe throughout the world under various trade names, including Fusible PVC® Pipe, FPVC®, Fusible C-900®, and Fusible C-905®, depending on the intended use of the pipe. (Marti Affidavit, ¶ 7).

4. Defendant Eugene Palermo (“Palermo”) is a resident of Tennessee. (Ans., ¶ 17).

5. Defendant Palermo was paid to perform services on behalf of a division of Chevron Phillips Chemical Company LP known as Performance Pipe. (See Transcript of October 23, 2015 Deposition of Eugene Palermo (“Palermo Dep”), pp. 30:25-31:8, attached as Exhibit B; *see also Palermo v. Underground Solutions, Inc.*, 2012 U.S. Dist. LEXIS 107711, at *11 (S.D. Cal. Aug. 1, 2012) (Defendant has submitted a transcript of the deposition of Gene Palermo, taken in a separate action, in which Palermo states: “it’s pretty obvious I have a relationship with Performance Pipe. I have a consulting agreement with them. I do work for them.”)).

6. Performance Pipe is the largest manufacturer of HDPE water and wastewater pipe in North America and does not manufacture or sell PVC pipe. (Ans., ¶ 22; *see also* <http://www.performancepipe.com/en-us/pages/aboutus.aspx> (“Performance Pipe, a division of Chevron Phillips Chemical Company LP, is the largest producer of polyethylene piping products in North America)).¹

7. UGSI’s Fusible PVC® Pipe competes with HDPE pipe manufactured by Performance Pipe. (Ans., ¶ 2; *see also* Palermo Dep, p. 32:14-20).

8. Palermo was specifically paid by Performance Pipe to give presentations about Fusible PVC® Pipe. (Palermo Dep, pp. 31:12-32:9).

9. In addition, Palermo was paid by two HDPE pipe interest groups, the Plastics Pipe Institute (“PPI”) and the Alliance for PE Pipe (the “PE Alliance”), including for the purposes of giving presentations about Fusible PVC® Pipe. (Palermo’s Answers to Interrogatories, No. 18, attached as Exhibit C; Palermo Dep., p. 36:5-37:20; *see also* Transcript of December 29, 2015

¹ The Court may take judicial notice of the contents of a website. *Martin v. Living Essentials, LLC*, 2016 U.S. Dist. LEXIS 11287, at *10 n.5 (N.D. Ill. Feb. 1, 2016)

Deposition of Alliance for PE Pipe Executive Director Peter Dyke (“Dyke Dep”), p. 9:17-20 and pp. 11:10-12:1, attached as Exhibit D).

FACTS RELATING TO VENUE AND JURISDICTION

10. This Court has jurisdiction of the subject matter and the parties under § 39 of the Federal Trademark Act, 15 U.S.C. § 1121, and the Judicial Code, 28 U.S.C. §§ 1331, 1338 and 1367(a). (Ans., ¶ 19).

11. Venue is proper in this Court under 28 U.S.C. §§ 1391(b)-(d). (Ans., ¶ 20).

THE “PALERMO SLIDE SHOW” AND PRESENTATIONS AT WATER INDUSTRY CONFERENCES

12. Palermo created a PowerPoint titled “Plastic Pipe for Water Distribution – What You Need To Know About RCP and Butt Fusion Integrity.” (the “Palermo Slide Show”) (Ans., ¶ 24; *see also* Palermo’s Response to Requests for Admission, No. 1, attached as Exhibit E).

A true and accurate copy of the Palermo Slide Show is attached as Exhibit F.

13. Palermo presented various iterations of the Palermo Slide Show at the following water industry conferences, and others, throughout the United States between 2010 and 2013:

- a. Florida AWWA (November 2010)
- b. Minnesota Rural Water Association (March 2012)
- c. American Society of Civil Engineers Pipelines Conference (August 2012)
- d. Michigan AWWA (September 2012)
- e. Michigan Rural Water Association (March 2013)
- f. Florida AWWA (December 2013)

(Ans., ¶ 25; 36; *see also* Palermo’s Answers to Interrogatories, No. 21).

14. The audiences in the above conferences included pipe industry consumers, including utilities, contractors, and engineers who select pipe for use in municipal waste and waste water applications, and who advise municipalities concerning same. (Marti Affidavit, ¶ 10; *see also* Palermo Dep., pp. 238:7-239:6).

15. Palermo also reproduced the Palermo Slide Show on a website he maintained at www.plasticspipe.com, which remained posted until 2014. (Ans., ¶ 24).

16. In addition to the Palermo Slide Show, Palermo also posted articles on www.plasticspipe.com that contained inaccurate and misleading information regarding the alleged susceptibility of Fusible PVC® Pipe to rapid crack propagation, including: “Correlating Plastic Pipe RCP Field Failures with RCP Critical Pressure for Water Pipe Applications”; “Comments on Revision to ANSI/AWWA C605”; “How to Design Against Long-Running Cracks”; and “Characteristics of Butt Fusion Joints in Thermoplastic Pipe for Water Applications.” (Ans., ¶ 24 and ¶ 34).

17. The content of the Palermo Slide Show focused on Fusible PVC® Pipe and its alleged predisposition to rapid crack propagation. (See Ex. F).

18. During these presentations, Palermo failed to disclose his financial ties to Performance Pipe, PPI, the PE Alliance or the HDPE industry. (Palermo Dep., pp. 108:10-109:23; *see* UGSI’s Second Set of Requests for Admission, at ¶¶ 2-7, attached as Exhibit G).²

PALERMO’S FALSE AND MISLEADING STATEMENTS ABOUT FUSIBLE PVC® PIPE

a. Falsehoods Related to the Critical Pressure Testing by Greenshield & Leavers

19. The Palermo Slide Show contains an extended, multi-slide discussion of the role of critical pressure in the fracture resistance of PVC pipe, including resistance to rapid crack propagation. (Ex. F, slides 15-26).

20. Palermo defines rapid crack propagation (“RCP”) as a material failure mode in which a crack propagates very rapidly over long distances. (Ex. F, slide 15).

21. The Palermo Slide Show states that HDPE is “not very susceptible to RCP” and

² Because Palermo failed to respond to UGSI’s Second Set of Requests for Admission, all matters contained therein are deemed admitted. See Fed. R. Civ. P. 36(a)(3).

PVC pipe is “more susceptible to RCP.” (Ex. F, slide 16).

22. The Palermo Slide Show compares the critical pressure of PVC and HDPE pipe in reference to a study conducted by C.J. Greenshield & P.S. Leavers (“Greenshield & Leavers”) titled “Rapid Crack Propagation in Plastic Water Pipe: Measurement of Dynamic Fracture Resistance.” (Ex. F, slide 16).

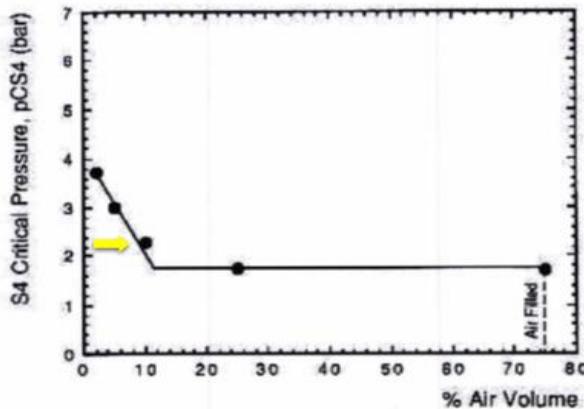
23. The Palermo Slide Show describes a test developed by one of the researchers, Dr. Pat Leavers, the small-scale steady state (S4) test, and how it correlates to the Full Scale test method adopted by the International Standards Organization 13478. (Ex. F, slide 17).

24. With reference to a separate study by Greenshield & Leavers entitled “The Effect of Air Pockets on Rapid Crack Propagation in PVC and PE water pipe,” the Palermo Slide Show unambiguously states that the critical pressure for PVC pipe at less than 10% air is 1.6 bar. (*See* Ex. F, slide 23).

25. This above figure is inaccurate: Greenshield & Leavers’ S4 critical pressure testing found that with a mixture of 10% air/90% water, a crack would propagate 4.7 diameters (the minimum distance required to be considered a rapid crack propagation) in PVC pipe at 2.3 bar, which is more resistant than Palermo indicated in his presentation. (*See* Transcript of March 14, 2016 deposition of Dr. Pat Leavers (“Leavers Dep”), p. 64:6-17, attached as Exhibit H).

26. In fact, Palermo’s own slides reveal his error, as reflected by the yellow arrow below, which shows a marking at 2.3 bar – not 1.6 bar, as communicated by Palermo:

S4 Critical Pressure –PVC*



*C.J. Greenshields and P.S. Leever, "The effect of air pockets on rapid crack propagation in PVC and PE water pipe", *Plastic, Rubber and Composites Processing and Applications*, 24 (1995).



(Ex. F, slide 22). The Palermo Slide Show cites specifically to the Greenshields and Leever study; however, it does so in support of the figures calculated using 1.6 bar, when Greenshield and Leever used 2.3 bar instead. (See Ex. F, slide 22).

27. When Dr. Pat Leever, the lead researcher in the S4 critical pressure testing, was asked during his deposition about Palermo's presentation on the critical pressure of PVC pipe at less than 10% air, Leever stated that Palermo was incorrect in his reference to the S4 testing. (Leever Dep. p. 64:6-17; *see also* Dale Edwards Expert Report ("Edwards Report"), attached as Exhibit I, p. 13 ("Palermo claims this value is 1.6 bar, when actually the 10 percent air value is 2.3 bar")).

b. Falsehoods Related the Crack Lengths in Alleged RCP events

28. The Palermo Slide Show also presented false information about the length of pipe fractures experienced in alleged rapid crack propagation events. (Palermo Dep., pp. 84:16-85:25; *see also* Edwards Report, pp. 6-12).

29. The Palermo Slide Show contained the following slide concerning "Known RCP

Field Failures in Butt Fused PVC Pipe.”

Known RCP Field Failures in Butt Fused PVC Pipe

No.	RCP Failure Location	Date of RCP Failure	Pipe size and DR	Length of RCP crack	Joined by butt fusion
1	Winter Park, FL	2004	8" DR 18	200 ft	Y
2	Danville, CA	2006	20" DR 18	400 ft	Y
3	Collier County, FL	2007	30" DR 25	1100 ft	Y
4	Greencastle, IN	2007	10" DR 21	800 ft	Y
5	Greencastle, IN (2)	2007	10" DR 21	43 ft	Y
6	Pittsburgh, PA	2007	24" DR 25	160 ft	Y
7	Clay County, FL	2008	20" DR 18	600 ft	Y
8	Clay County, FL	2008	20" DR 18	1600 ft	Y
9	Xenia, IA	2008	20" DR 18	1100 ft	Y
10	Tampa, FL	2009	8" DR 25	200 ft	Y
11	Baton Rouge, LA	2009	36" DR 32.5	300 ft	Y
12	Baton Rouge, LA	2009	24" DR 25	900 ft	Y
13	Collier County, FL	2010	30" DR 25	750 ft	Y
14	Chatham, IL	2011	18" DR 25	850 ft	Y
15	Fremont, CA	2011	12" DR 25	2000 ft	Y
16	Green Bay, WI	2011	16" DR 18	300 ft	Y
17	Salt Lake City, UT	2012	16" DR 31	350 ft	Y
18	Salt Lake City, UT	2012	16" DR 31	3300 ft	Y
19	Dorchester County, SC	2012	20" DR 21	2200 ft	Y
20	Watford City, ND	2013	16" DR 21	850 ft	Y

(Ex. F, slide 3).

30. This slide, and later slides expounding on each failure, contain literally false reports of the crack lengths experienced in fracturing incidents involving Fusible PVC® Pipe. (See Palermo Dep., pp. 84:16-85:5; Edwards Report, pp. 6-12).

31. The following crack lengths were inaccurately reported as being longer than they were in the field:

<i>Location of Incident</i>	<i>Crack Length Listed in Palermo's Presentations</i>	<i>Actual Crack Length</i>
Baton Rouge, LA	300 feet	3 feet
Dorchester County, SC	2200 feet	~ 1700 feet
Greencastle, IN	800 feet	430 feet
Fremont, CA	2000 feet	200 feet

(Edwards Report, pp. 6-12; *see also* Palermo Dep., pp. 84:16-85:5; 92:9-93:1; 173:18-174:12).

32. In addition, while the Palermo Slide Show states with respect to an alleged RCP event in Salt Lake City, Utah, that the municipality would need to replace “all 13 miles of fused PVC pipe,” the pipe involved in that incident was only seven miles long; the Utah water municipality could not have replaced 13 miles of pipe. (Ex. F, slide 12; Palermo Dep., pp. 174:13-177:1; *see also* Edwards Report, p. 11 (“the water municipality did not replace 13 miles of pipe”)).

c. Deception Regarding the Cause of Alleged Rapid Crack Propagation Events

33. Palermo’s Slide Show also withheld critical information about the cause of the alleged RCP events he identifies. (Response to Requests for Admission, No. 33; *see also* Edwards Report, p. 5 (“[Palermo’s] presentations intentionally leave out important facts about the cause of the failures the he describes as RCP field failures”)).

34. For example, the fracturing event in Collier County, Florida (No. 13 in the table above) was caused by gross negligence by a third party, the contractor installing the pipe, who failed to remove air from the pipe. (Palermo Dep., p. 49:18-59:4; Response to Requests for Admission, Nos. 41-42; *see also* Edwards Report, p. 7).

35. The fracturing event in Baton Rouge, Louisiana (No. 11 in the table above) was also caused by contractor error. Specifically, localized impact/bending due to improper tailing of the pipe by the contractor caused the pipe to come off of the rollers and impact the fusion equipment. (Response to Requests for Admission, No. 36; *see also* Edwards Report, p. 9).

36. The fracturing event in Greencastle, Indiana (Nos. 4 and 5 in the table above) was caused by a poorly executed hot tap procedure; again, a failure due to contractor error. (Response to Requests for Admission, No. 35; *see also* Edwards Report, p. 8).

37. Palermo admitted in his deposition that the cause of the Indiana incidents was a

“cutting or a tapping operation, or something of that nature,” but failed to disclose that to his audiences. (Palermo Dep., p. 127:6-8 (*Q*: Did you disclose the details of that cause anywhere in Exhibit 1 / *A*: No.)).

38. The fracturing event in Watford City, North Dakota (No. 20 in the table above) was caused when a pipe that eroded 96% was subjected to extreme overbending. (Response to Requests for Admission, No. 49; Edwards Report, p. 11; *see also* Palermo Dep., p. 159:12-16).

39. Once again, Palermo never disclosed these conditions to his audience, leaving them to believe the cause of the fracture was the pipe itself. (Palermo Dep., p. 159:18-25 (*Q*: Did you inform the reader anywhere in Exhibit 1 that your understanding of the cause of the incident in number 20, Watford City, North Dakota, was a bending incident / *A*: No.)).

40. The fracturing even in Fremont, California (No. 15 in the table above) was caused by a pipe explosion due to large volumes of air, a condition never disclosed by Palermo. (Edwards Report, p. 10).

41. Indeed, Palermo never developed “an understanding as to the cause of the Fremont incident,” but nonetheless presented it as a “known” RCP failure. (Palermo Dep., 149:22-24).

42. Regarding a fracturing incident in Pittsburgh, Pennsylvania (No. 6 in the table above), Palermo never advised his audience that the cause of the pipe failure was bending by a third-party during installation. (Response to Requests for Admission No. 36, *see also* Palermo Dep., p. 129:1-21).

43. The reality is that Palermo never investigated any of these pipe incidents, but rather concluded by looking at photographs of the fractures or receiving second-hand accounts, that the cause of the fractures was rapid crack propagation. (Palermo Dep., pp. 12:15-18; 126:12-15; 139:1-9; 148:19-24).

d. Palermo's Misrepresentation of Testing Applied to Fusible PVC® Pipe

44. Palermo also misled his audiences about his use of testing methods that do not produce reliable results with respect to Fusible PVC® Pipe. (*See* Steve Ferry Expert Report (“Ferry Report”), p. 2, attached as Exhibit J (“the tests to characterize PE butt fusions are either completely inapplicable to PVC due to inherent material property differences, or at minimum would require different testing details and technical requirements for evaluation”); *see also* Edwards Report, pp. 15-17).

45. The pipe used in the Greenshield & Leevers S4 tests was manufactured in 1995 and would not meet current American Water Works (AWWA) Standards. (Response to Requests for Admission, No. 7; *see also* Palermo Dep., pp. 190:22-193:23). Pound for pound, the 1995 pipe used by Greenshield & Leevers had a significantly lower average molecular weight than modern PVC pipe. (Edwards Report, pp. 15-16). The higher molecular weight of a pipe, the more resistance it has to fracturing. (Leevers Dep., p. 81:8-19).

46. Furthermore, Palermo’s use of 10% air as a measure by which Palermo tests critical pressure is also unreliable. (Ex. F, slide 23; *see also* Edwards Report, p. 13 (“Palermo grossly misuses the data by taking an unrealistic condition (>10% air) for his example calculation that is not typical of water pipe systems and is specifically warned against in industry standards, installation guides and operating guides”)).

47. The typical amount of air in water distribution piping would be less than two percent and operating at higher levels is potentially dangerous. (Edwards Report, p. 13).

48. Palermo also purports to utilize the International Organization for Standardization (ISO) standards in his analysis. (*See* Ex. F, slides 17-21).

49. However, Palermo plainly misapplies the ISO standard (13477) referenced in the

Palermo Slide Show because that standard applies to gas transmission, while Fusible PVC® Pipe carries water and waste water. (Edwards Report, p. 13; *see also* ISO 13477, principle 5, attached as Exhibit K).

50. Palermo also misapplied the bent strap test referenced in his Slide Show. (Ex. F, slide 46).

51. The bent strap test is designed for HDPE pipe only and is not reliable to test the fracture resistance of Fusible PVC® Pipe. (Ferry Report, p. 5 (“[Bent Strap Test] is NOT APPLICABLE TO PVC butt fusion joints”) (emphasis original)).

52. Palermo misrepresented that all four Fusible PVC® joints tested in a bent strap test failed, but the underlying report states that none of the samples tested failed at the joint. (*See* Transcript of March 22, 2016 Expert Deposition of Eugene Palermo (“Palermo Expert Dep”), pp. 125:23-126:25, attached as Exhibit L).

53. HDPE pipe and Fusible PVC Pipe are made of different materials and their respective fracture resistance cannot be determined by a universal test. (Ferry Report, p. 2 (“Application of PE-specific test methods and material or product specification requirements to PVC materials and PVC butt fusion joints represents an egregious mistake, in that PE is a semi-crystalline material operating above its glass transition temperature (i.e. in the “rubbery” phase/state) while PVC is an amorphous material operating below its glass transition temperature (i.e. in the “glassy” phase/state)).

54. Palermo concealed from his audiences that rapid crack propagation cannot occur in Fusible PVC® Pipe, or any other kind of pipe, if that pipe is handled, installed and operated pursuant to industry standards, as an initial crack-initiating event is required for rapid crack propagation to occur. (Palermo Dep., pp. 114:15-115:14; Edwards Report, p. 12 (“No mention is

made anywhere in [the Palermo Presentation] that if one does the necessary things to avoid an “initiating event” then RCP does not occur.”).

CONSUMER RESPONSE TO THE PALERMO SLIDE SHOW’S FALSE AND MISLEADING CONTENT

55. Consumers in the pipe industry, including contractors and engineers who select pipe for use in waste and waste water applications have been materially influenced by Palermo’s statements about Fusible PVC® Pipe. (Marti Affidavit, ¶ 11).

56. Palermo admitted in the following e-mail to Performance Pipe that his Slide Show influenced a potential consumer in Michigan to use HDPE pipe over Fusible PVC® Pipe.

Hi Wes. The presentation at the MI AWWA went very well. After the presentation, this gentleman came up to me and said he was debating whether to use fusible PVC or HDPE. After hearing my presentation, he decided he would use HDPE. He asked me for a copy of the PPT presentation.

A true and accurate copy of that e-mail is attached as Exhibit M.

57. Further, a consulting engineer in Illinois, Julie Morrison, was influenced by Palermo’s false and misleading information about Fusible PVC® Pipe. (See Transcript of December 4, 2015 Deposition of Julie Morrison (“Morrison Dep”), pp. 9:22-22:14, attached as Exhibit N).

58. On April 19, 2013, Dan Christensen, Regional Sales Manager for UGSI, met with Ms. Morrison, who was consulting for a water main improvement project in Boulder Hill, Illinois. (Morrison Dep., pp. 9:22-11:4).

59. Mr. Christensen and Ms. Morrison met to discuss UGSI’s interest in bidding on the project. (Morrison Dep., 14:20-15:22).

60. After leaving the meeting, Ms. Morrison was open to the possibility of using Fusible PVC® Pipe on the project. (Morrison Dep., p.16:9-17).

61. Subsequently, on May 2, 2013, while researching Fusible PVC® Pipe on the

internet, Ms. Morrison found a paper by Palermo entitled "Characteristics of Butt Fusion Joints in Thermoplastic Pipe for Water Applications." (Morrison Dep., pp. 16:19-17:22).

62. Later that day, Ms. Morrison advised Mr. Christensen that Fusible PVC® Pipe would not be included as an acceptable material on the project due to "some concerns with the PVC fused joints after researching and finding the attached 2012 article." (Julie Morrison email to Dan Christensen, dated May 2, 2013, attached as Exhibit O).

63. Ms. Morrison later testified that her concerns with using PVC were that PVC butt fusion joints are potentially brittle and prone to breaking, as alleged in Palermo's article. (Morrison Dep., 21:1-14).

64. Less than two weeks later, Steve Verseman, a project manager with Baxter & Woodman in Illinois, received an email from a contractor, with the Palermo Slide Show attached. (See Transcript of November 24, 2015 Deposition of Steven Verseman ("Verseman Dep"), pp. 17:12-18:10, attached as Exhibit P).

65. Mr. Verseman forwarded the e-mail to Mr. Christensen, which contained the following message:

To Whom It May – and should, and most likely will – Concern:

A couple of days ago we received an e-mail from a contractor with the following link. <http://www.plasticspipe.com/Plastic-Pipe-for-Water-Distribution-0313-final.html>.

Once again, Fusible PVC pipe – and specifically Rapid Crack Propagation – is making a few people here at Baxter & Woodman, Inc. very concerned about ever again specifying/using Fusible PVC on any of our projects.

Is Fusible [sic] PVC pipe available in thicknesses greater than DR14? (e.g. DR 13 as mentioned in the above link? The link even mentions DR 11 and DR 9 similar to HDPE).

It will most likely take more than a simple reassurance from Underground Solutions that FPVC is an acceptable pipe material and jointing [sic] method. Please let us know how Underground Solutions (or other fusible PVC manufacturers, installers,

etc. if there are any) is going to address the study presented in the above link.

A true and accurate copy of the e-mail is attached as Exhibit Q.

66. The contractor who wrote the above e-mail remained a UGSI customer only after UGSI employees, including Mr. Christensen, presented a slideshow rebutting the content of the Palermo Presentation, at a luncheon for its executives. (Verseman Dep., pp. 27:22-30:22).

67. UGSI employees have had to travel around the country to rebut Palermo's false and misleading statements about Fusible PVC® Pipe, including those made in the Palermo Slide Show. (See Marti Affidavit, ¶ 12).

THE EGREGIOUS NATURE OF PALERMO'S CONDUCT

68. UGSI's position that Palermo's statements were false, misleading and actionable was known to Palermo: UGSI sent Palermo a cease and desist letter on March 19, 2012, requesting he stop making such false statements. (See UGSI Cease and Desist Letter to Eugene Palermo, dated March 19, 2012, attached as Exhibit R).

69. Despite receiving the cease and desist letter, Palermo made the following presentations thereafter:

- a. Minnesota Rural Water Association (March 2012)
- b. Michigan AWWA (September 2012)
- c. American Society of Civil Engineers Pipelines Conference (August 2012)
- d. Michigan Rural Water Association (March 2013)
- e. Florida AWWA (December 2013)

(Ans., ¶ 25; 36; *see also* Palermo's Answers to Interrogatories, No. 21).

70. Palermo also continued to post materials on his website, in defiance of the cease and desist letter. (Palermo Dep., pp. 233:21-235:11).

71. Palermo even admitted in the following July 2013 e-mail to UGSI that he no longer believed Fusible PVC® Pipe was susceptible to fracturing:

I will no longer provide negative information about butt fusion of PVC Pipe. I believe that UGSI has conducted significant testing to develop the proper butt fusion procedure for PVC Pipe and your field failure rate is very low...

A true and accurate copy of the July 6, 2013 e-mail is attached as Exhibit S; *see also* Response to Requests for Admission, No. 58.

72. Nonetheless, despite this stark admission, Palermo continued his campaign against Fusible PVC® Pipe, including by making presentations in Florida, and by maintaining documents he knew were inaccurate on his website. (Response to Request for Admission, No. 59; Ans., ¶ 25; 36; *see also* Palermo's Answers to Interrogatories, No. 21).

Date: April 1, 2016

Respectfully submitted,

Underground Solutions, Inc.

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